

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An alkaline storage battery comprising:

- (a) a shallow case having an opening and a bottom;
- (b) sealing plate covering the opening of said case;
- (c) a first electrode adjacent to an inner face of the bottom of said case;
- (d) a second electrode adjacent to an inner face of said sealing plate;
- (e) a separator interposed between said first electrode and said second electrode;
- (f) an alkaline electrolyte; and
- (g) at least one current collector plate selected from the group consisting of (g1) a

conductive current collector plate joined to the inner face of the bottom of said case and forming a gas transfer path distributed two-dimensionally between the inner face of the bottom of said case and said first electrode and (g2) a conductive current collector plate joined to the inner face of said sealing plate and forming a gas transfer path distributed two-dimensionally between the inner face of said sealing plate and said second electrode for allowing a generated gas to transfer, said path including pores that communicate with one another and being formed of a part of said current collector plate,

wherein said current collector plate (g) comprises a conductive sheet having a plurality of protrusions produced by punching comprising a corrugated plate from both sides,

said corrugated plate having a plurality of pores and protrusions around said pores,
the protrusions around the pores closest to each other being directed to opposite
directions.

wherein said plurality of protrusions have tip ends that are buried in said first electrode or said second electrode, and

wherein said tip ends buried in said first electrode or said second electrode have a length that is 10% or more of the thickness of said current collector plate (g) including said protrusions.

2. (Previously Presented) The alkaline storage battery in accordance with claim 1, wherein said path is distributed in an area of 50 to 100% of the whole inner face of the bottom of said case or the whole inner face of said sealing plate.

3. (Original) The alkaline storage battery in accordance with claim 1, wherein said first electrode is 100 μm or more distant from the inner face of the bottom of said case, or said second electrode is 100 μm or more distant from the inner face of said sealing plate.

4. (Original) The alkaline storage battery in accordance with claim 1, wherein one of said first electrode and said second electrode is a negative electrode having a core material comprising punched metal.

5. (Original) The alkaline storage battery in accordance with claim 1, wherein one of said first electrode and said second electrode is a negative electrode comprising a hydrogen storage alloy or zinc.

6. (Cancelled).

7. (Cancelled).

8. (Previously presented) The alkaline storage battery in accordance with claim 1 wherein said current collector plate (g) including said protrusions has a thickness of 100 μm or more.

9. (Previously presented) The alkaline storage battery in accordance with claim 1 wherein said current collector plate (g) including said protrusions has a thickness that is 1/3 or less of the thickness of said first electrode or said second electrode adjacent to said current collector plate.

10. (Cancelled).

11. (Cancelled).

12. (Currently Amended) The alkaline storage battery in accordance with claim 1, wherein said conductive sheet having the plurality of protrusions comprises a metal sheet deformed by punching from one side or both sides and has a plurality of pores and burrs formed around said pores, the burrs being said protrusions, and said conductive sheet including said burrs has a thickness that is equal to or more than twice the material thickness of said metal sheet.

13. (Canceled)

14. (Original) The alkaline storage battery in accordance with claim 12, wherein pores closest to each other have a center-to-center distance of 0.3 mm or more and 5 mm or less.

15. (Canceled)

16. (Cancelled).

17. (Currently Amended) An alkaline storage battery comprising:

- (a) a shallow case having an opening and a bottom;
- (b) a sealing plate covering the opening of said case;
- (c) a first electrode adjacent to an inner face of the bottom of said case;
- (d) a second electrode adjacent to an inner face of said sealing plate;
- (e) a separator interposed between said first electrode and said second electrode;
- (f) an alkaline electrolyte; and
- (g) at least one current collector plate selected from the group consisting of (g1) a conductive current collector plate joined to the inner face of the bottom of said case and forming a gap between the inner face of the bottom of said case and said first electrode and (g2) a conductive current collector plate joined to the inner face of said sealing plate and forming a gap between the inner face of said sealing plate and said second electrode, said gap including pores that communicate with one another and being formed of a part of said current collector plate,

wherein said current collector plate (g) comprises a conductive sheet having a plurality of protrusions produced by punching comprising a corrugated plate from both sides,

said corrugated plate having a plurality of pores and protrusions around said pores,

the protrusions around the pores closest to each other being directed to opposite directions.

wherein said plurality of protrusions have tip ends that are buried in said first electrode or said second electrode, and wherein said tip ends buried in said first electrode or said second electrode have a length that is 10% or more of the thickness of said current collector plate [g] including said protrusions.

18. (New) An alkaline storage battery comprising:

(a) a shallow case having an opening and a bottom;

(b) a sealing plate covering the opening of said case;

(c) a first electrode adjacent to an inner face of the bottom of said case;

(d) a second electrode adjacent to an inner face of said sealing plate;

(e) a separator interposed between said first electrode and said second electrode;

(f) an alkaline electrolyte; and

(g) at least one current collector plate selected from the group consisting of (g1) a conductive current collector plate joined to the inner face of the bottom of said case and forming a gas transfer path distributed two-dimensionally between the inner face of the bottom of said case and said first electrode and (g2) a conductive current collector plate joined to the inner face of said sealing plate and forming a gas transfer path distributed two-dimensionally between the inner face of said sealing plate and said second electrode for allowing a generated gas to transfer, said path including pores that communicate with one another and being formed of a part of said current collector plate,

wherein said path is distributed in an area of 50 to 100 % of the whole inner face of the bottom of said case or the whole inner face of said sealing plate,

wherein said first electrode is 100 μm or more distant from the inner face of the bottom of said case, or said second electrode is 100 μm or more distant from the inner face of said sealing plate,

wherein said current collector plate (g) comprises a conductive sheet comprising a corrugated plate,

 said corrugated plate having a plurality of pores and protrusions around said pores,
 the protrusions around the pores closest to each other being directed to opposite
directions,

 wherein said current collector plate (g) including said protrusions has a thickness of 100
µm or more,

 wherein said current collector plate (g) including said protrusions has a thickness that is
1/3 or less of the thickness of said first electrode or said second electrode adjacent to said current
collector plate,

 wherein said protrusions have tip ends that are buried in said first electrode or said
second electrode,

 wherein said tip ends buried in said first electrode or said second electrode have a length
that is 10% or more of the thickness of said current collector plate (g) including said protrusions,

 wherein said conductive sheet comprises a metal sheet deformed by punching from both
sides and has a plurality of pores and burrs formed around said pores, the burrs being said
protrusions, and said conductive sheet including said burrs has a thickness that is equal to or
more than twice the material thickness of said metal sheet, and

 wherein thickness of said metal sheet is 20 to 50 µm.

19. (New) An alkaline storage battery comprising:

- (a) a shallow case having an opening and a bottom;
- (b) a sealing plate covering the opening of said case;
- (c) a first electrode adjacent to an inner face of the bottom of said case;
- (d) a second electrode adjacent to an inner face of said sealing plate;
- (e) a separator interposed between said first electrode and said second electrode;
- (f) an alkaline electrolyte; and
- (g) at least one current collector plate selected from the group consisting of (g1) a
conductive current collector plate joined to the inner face of the bottom of said case and forming
a gap between the inner face of the bottom of said case and said first electrode and (g2) a
conductive current collector plate joined to the inner face of said sealing plate and forming a gap

between the inner face of said sealing plate and said second electrode, said gap including pores that communicate with one another and being formed of a part of said current collector plate,

wherein said path is distributed in an area of 50 to 100 % of the whole inner face of the bottom of said case or the whole inner face of said sealing plate,

wherein said first electrode is 100 μm or more distant from the inner face of the bottom of said case, or said second electrode is 100 μm or more distant from the inner face of said sealing plate,

wherein said current collector plate (g) comprises a conductive sheet comprising a corrugated plate,

said corrugated plate having a plurality of pores and protrusions around said pores, the protrusions around the pores closest to each other being direct to opposite directions, wherein said current collector plate (g) including said protrusions has a thickness of 100 μm or more,

wherein said current collector plate (g) including said protrusions has a thickness that is 1/3 or less of the thickness of said first electrode or said second electrode adjacent to said current collector plate,

wherein said protrusions have tip ends that are buried in said first electrode or said second electrode,

wherein said tip ends buried in said first electrode or second electrode having a length that is 10% or more of the thickness of said current collector plate (g) including said protrusions,

wherein said conductive sheet comprises a metal sheet deformed by punching from both sides and has a plurality of pores and burrs formed around said pores, the burrs being said protrusions, and said conductive sheet including said burrs has a thickness that is equal to more than twice the material thickness of said metal sheet, and

wherein thickness of said metal sheet is 20 to 50 μm .